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METHOD FOR TREATING NEUROMUSCULAR DISORDERS AND  
CONDITIONS WITH BOTULINUM TOXIN TYPES A AND B

CROSS REFERENCE

This application is a continuation of serial number  
08/075,048, filed June 10, 1993.

FIELD OF THE INVENTION

The present invention provides novel methods for  
treating diseases of the nervous system, e.g.,  
neuromuscular disorders and conditions, with botulinum  
toxins. In addition, the present invention provides  
methods useful in all tissue and organ systems which  
involve the release of neurotransmitters, especially  
acetylcholine. These cholinergic transmission systems  
include neuromuscular junctions (muscles), smooth muscles  
(gut, sphincters, etc.) and secretions (salivation and  
mucus).

BACKGROUND OF THE INVENTION

A bacterial toxin, botulinum toxin, in particular  
botulinum toxin type A, has been used in the treatment of  
a number of neuromuscular disorders and conditions  
involving muscular spasm; for example, strabismus,  
blepharospasm, spasmodic torticollis (cervical dystonia),  
oromandibular dystonia and spasmodic dysphonia (laryngeal  
dystonia). The toxin binds rapidly and strongly to  
presynaptic cholinergic nerve terminals and inhibits the  
exocytosis of acetylcholine by decreasing the frequency  
of acetylcholine release. This results in local

paralysis and hence relaxation of the muscle afflicted by spasm.

For one example of treating neuromuscular disorders, see U.S. Patent No. 5,053,005 to Borodic, which suggests treating curvature of the juvenile